

Snow Depth Measurement using GPS on Karasawa Cirque, Japanese Northern Alps

Akihiko SASAKI^{1*}, Katsuhiko ASAH¹, Keisuke Suzuki¹

¹IMS, Shinshu Univ.

In the mountainous area, snow depth is known to increase so as to become of high altitudes. However, the snow depth distribution are hardly measured in the high mountain. It is significant to clarify the snow depth distribution based on actual measurement of snow depth in order to calculate the water equivalent of snow in its hydrographic basin. The measurement using GPS is attracted to attentions because the method of the GPS measurement is simple and high resolution. Especially, the Kinematic GPS measurement using two GPS receivers make possible to the measurement a wide area in a short time. We aim to measure the snow depth based on the Kinematic GPS measurement in Karasawa Cirque where is one of the biggest cirque in Japan,during snowmelt season in 2012.

Keywords: GPS, Kinematic Survey, Snow depth, Karasawa Cirque